

Abstract

A vapor fuel generation and management system for an evaporative fuel vapor engine includes a fuel tank that stores an evaporative liquid fuel, and a carbon canister connected to the headspace of the fuel tank to absorb and retain fuel vapor. A fuel vaporization unit has a liquid fuel inlet in communication with a liquid fuel outlet of the fuel tank, and a fuel vapor inlet in communication with the carbon canister. The fuel vaporization unit generates vapor fuel, i.e. a rich air/fuel mixture, and has a vapor fuel outlet in communication with an engine intake manifold. The fuel vaporization includes a stationary diffuser member that assists in generating the vapor fuel. A purge valve controls vapor fuel flow to the engine intake manifold.